High School Algebra
Grade Standards, Supporting Skills, and Examples

Indicator 1: Use procedures to transform algebraic expressions.

Core HS Standards
9-12.A.1.1. (Comprehension)Write equivalent forms of algebraic expressions using properties of the set of real numbers.
Advanced HS Standards
9-12.A.1.1A. (Application) Write equivalent forms of rational algebraic expressions using properties of real numbers.
9-12.A.1.2A. (Application) Extend the use of real number properties to expressions involving complex numbers.

Indicator 2: Use a variety of algebraic concepts and methods to solve equations and inequalities.

Core HS Standards
9-12.A.2.1. (Comprehension) Use algebraic properties to transform multi-step, single variable, and first-degree equations.
9-12.A.2.2. (Application) Use algebraic properties to transform multi-step, single variable, and first-degree inequalities and represent solutions using a number line.
Advanced HS Standards
9-12.A.2.1A. (Analysis) Determine solutions of quadratic equations.
9-12.A.2.2A. (Application) Determine the solution of systems of equations and systems of inequalities.
9-12.A.2.3A. (Application) Determine solutions to absolute value statements.

Indicator 3: Interpret and develop mathematical models.

Core HS Standards
9-12.A.3.1. (Application) Create linear models to represent problem situations.
9-12.A.3.2. (Comprehension) Distinguish between linear and nonlinear models.
Advanced HS Standards
9-12.A.3.1A. (Analysis) Distinguish between linear, quadratic, inverse variations, and exponential models.
9-12.A.3.2A. (Synthesis) Create formulas to model relationships that are algebraic, geometric, trigonometric, and exponential.
9-12.A.3.3A. (Analysis) Use sequences and series to model relationships.

Indicator 4: Describe and use properties and behaviors of relations, functions, and inverses.

Core HS Standards
9-12.A.4.1. (Application) Use graphs, tables, and equations to represent linear functions.
Advanced HS Standards
9-12.A.4.1A. (Analysis) Determine the domain, range, and intercepts of a function.
9-12.A.4.2A. (Analysis) Describe the behavior of a polynomial, given the leading coefficient, roots, and degree.
9-12.A.4.3A. (Analysis) Apply transformations to graphs and describe the results.
9-12.A.4.4A. (Application) Apply properties and definitions of trigonometric, exponential, and logarithmic expressions.
9-12.A.4.5A. (Analysis) Describe characteristics of nonlinear functions and relations.
9-12.A.4.6A. (Application) Graph solutions to linear inequalities.